

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MAN WONG

Appeal No. 95-3611
Application 07/904,419¹

ON BRIEF

Before GARRIS, WEIFFENBACH and PAK, Administrative Patent Judges.
GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the final rejection of claims 1 through 15 which are all of the claims in the application.

The subject matter on appeal relates to a method for vapor phase wafer cleaning comprising the steps of combining hydrogen fluoride, hydrogen chloride and water vapor, and exposing the

¹ Application for patent filed June 25, 1992.

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wafer to the combined vapor. This appealed subject matter is adequately illustrated by independent claim 1 which reads as follows:

1. A method for vapor phase wafer cleaning, comprising the steps of:

combining hydrogen fluoride, hydrogen chloride and water vapor; and

exposing the wafer to said combined vapor.

The references relied upon by the examiner in the rejections before us are:

Tanaka	5,078,832	Jan. 7, 1992
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Deal, "Vapor-Phase Wafer Cleaning, Oxide Etching, and Thin Film Growth", Paper presented at First International Symposium on Cleaning Technology in Semiconductor Device Manufacturing at the Fall Meeting of The Electrochemical Society in Hollywood, Florida, pages 1-8, October 15-20, 1989.

Claim 1 stands rejected under 35 USC § 102(b) as being anticipated by Deal.

Claims 2 through 15 stand rejected under 35 USC § 103 as being unpatentable over Deal in view of Tanaka.

We will not sustain either of these rejections.

Both of the rejections before us are pivotally founded upon

the examiner's position that "figure 1 of the Deal reference shows HCl connected to a gas line that can be used to combine HCl with HF/H₂O" and accordingly that "the use of HCl as part of an etching mixture is clearly anticipated or at least strongly suggested by the Deal reference" (Answer, page 4). As fully explained by the appellant in his Brief, however, Deal contains utterly no teaching or suggestion of combining hydrogen fluoride and hydrogen chloride as required by each of the claims on appeal. Contrary to the examiner's belief, the mere fact that the apparatus shown in Figure 1 of this reference "can be used to combine HCl with HF/H₂O" (emphasis added) is inadequate to establish either anticipation or obviousness in relation to the here claimed step of combining hydrogen fluoride and hydrogen chloride. It is well settled with respect to obviousness (and a fortiori anticipation) that the mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1965).

In light of the foregoing, it is apparent that we cannot sustain the examiner's § 102(b) rejection of claim 1 as being anticipated by Deal. Moreover, since the examiner does not even

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allege that the deficiencies of this reference are supplied by Tanaka, we also cannot sustain the § 103 rejection of claims 2 through 15 as being obvious over Deal in view of Tanaka.

The decision of the examiner is reversed.

REVERSED

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BRADLEY R. GARRIS)	
Administrative Patent Judge)	
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)	
)	BOARD OF PATENT
CAMERON WEIFFENBACH)	
Administrative Patent Judge)	APPEALS AND
)	
)	INTERFERENCES
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CHUNG K. PAK)	
Administrative Patent Judge)	

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